REMARKS

35 U.S.C. § 102 Rejections

The Examiner has rejected claims 1-3, 5-8, 15, 16, 18-20, and 22 under 35 U.S.C. § 102(b) as being anticipated by Fujimura.

Claim 1 includes forming a conductor on the dielectric after the removal of the photoresist without first performing a wet clean. Specifically, claim 1 includes the limitation "forming a metal part adjacent to the dielectric layer without a wet clean following the removal of the photoresist."

Fujimura does not disclose forming a conductor on the dielectric after the removal of the photoresist without first performing a wet clean. Fujimura discloses a plasma treating method that subjects an object surface to a plasma treating within a chamber (Abstract). As illustrated in Figure 1A, a resist layer 2 is formed on a silicon substrate 1 (Col. 3, lines 4-5). After an ion implantation process, a deteriorated layer 2b covers a non-deteriorated layer 2a of the resist layer 2 (Col. 3, lines 11-14). As illustrated in Figure 1B, a reactive ion etching (RIE). Module 3 is then used to remove the deteriorated layer 2b by hydrogen plasma (Col. 3, lines 21-24). If oxygen plasma is used to remove the deteriorated layer 2b, the injected material is oxidized and remains as an oxide (Col. 3, lines 43-45). The RIE process is carried out by supplying hydrogen gas to the plasma chamber 8 shown in Figure 2 and exciting hydrogen using a high-frequency wave (Col. 3, lines 52-56). The downstream process is carried out in the downstream module 4 by supplying oxygen and water, using a microwave, and setting the temperature of stage 5b to

200° C. Fujimura makes no mention of forming a conductor on a dielectric after removal of photoresist without first performing a wet clean. Specifically, Fujimura does not disclose forming a conductor on a dielectric after removal of photoresist without first performing a wet clean.

Therefore, claim 1 is not anticipated by Fujimura because claim 1 includes a limitation that is not disclosed by Fujimura.

Claims 2, 3, 5-8, 15, 16, 18-20, and 22 are dependent on claim 1 and should be allowable for the same reasons as claim 1 stated above.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1–3, 5-8, 15, 16, 18-20, and 22 under 35 U.S.C. § 102(b) as being anticipated by Fujimura.

35 U.S.C. § 103 Rejections

The Examiner has rejected claims 9-16 and 18-25 under 35 U.S.C. § 103(a) as being unpatentable over Fujimura in view of U. S. Patent 6,007,671 to Fujimura '671.

Claims 9-16 and 18-24 are dependent on claim 1 and should be allowable for the same reasons as claim 1 stated above and because Fujimura '671 also does not teach or suggest forming a conductor on a dielectric after removal of photoresist without first performing a wet clean.

Claim 25 has been amended to include a fluorine-containing process gas within the mixture of gases. Specifically, claim 25 includes the limitation "energizing a mixture of gases comprising a majority components of a reducing process gas, a first minority components of between 0.1% and 10% by volume of an

oxidizing process gas, and a second minority component of a fluorine-containing process gas."

Fujimura does not teach or suggest a fluorine-containing process gas within the mixture of gases. Fujimura, in this regard, discloses a hydrogen plasma process using a first gas which includes hydrogen molecules as the main component and a second gas which includes a quantity of hydrogen smaller than that included in the first gas (Col. 7, lines 40-44). In a preferred embodiment, the first gas is hydrogen and the second gas is water vapor (Col. 7, lines 44-46). The second gas may be a gas of organic compounds including hydrogen and oxygen or inorganic compounds including hydrogen (Col. 7, lines 48-50). The second gas may include a material selected from a group which includes alcohol, organic acid, phosphine, arsine, borane, diborane, water vapor, silane, and ammonia (Col. 7, lines 50-55). Fujimura makes no mention of a fluorine-containing process gas. Specifically, Fujimura does not teach or suggest a fluorine-containing process gas within the mixture of gasses.

Fujimura '671 does not teach or suggest a fluorine-containing process gas within the mixture of gases. Fujimura '671 teaches a hydrogen plasma down-flow processing method and apparatus to make it difficult for hydrogen atoms to deposit and recombine on the internal wall of the apparatus (Abstract). A principal portion of the silicon oxide region is heated up to 400° C or higher to prevent the hydrogen atoms to be absorbed to the surface of the silicon oxide (Col 4, lines 26-29). In addition to hydrogen a gas containing one oxygen atom may be used. The gases include O_2, H_2O, H_2O_2, NO_2, N_2O, NH_3, and OH. Fujimura '671 makes no mention

of a fluorine-containing process gas. Specifically, Fujimura '671 does not teach or suggest a fluorine-containing process gas within the mixture of gases.

Therefore claim 25 is patentable over Fujimura and Fujimura '671 because claim 25 includes a limitation that is not taught or suggested by Fujimura and Fujimura '671.

Applicant, accordingly, respectfully requests withdrawal of the rejection of claims 9-16 and 18-25 under 35 U.S.C. § 103(a) as being unpatentable over Fujimura in view of U. S. Patent 6,007,671 to Fujimura '671.

Applicant respectfully submits that the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Michael A. Bernadicou at (408) 720-8300.

Pursuant to 37 C.F.R. 1.136(a)(3), applicant(s) hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: March 23, 2004

Mark A. Kupanoff
Reg. No. 55,349

Patent Counsel
Legal Affairs Dept.
Applied Materials, Inc.
P. O. Box 450A
Santa Clara, CA 95052

Direct telephone calls to:
Michael A. Bernadicou
(408) 720-8300